AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) An optoelectronic sensing device, ~~in particular a laser scanner,~~ comprising a transmitter device for the transmission of electromagnetic radiation, ~~preferably pulsed electromagnetic radiation,~~ at least one receiver device associated with the transmitter device and at least one deflection device, with which radiation transmitted by the transmitter device can be directed into a monitored zone and radiation reflected from the monitored zone can be directed onto the receiver device, characterized in that

the transmitter device includes a plurality of transmitter modules ~~preferably precisely two transmitter modules,~~ which are spatially separate from one another and which each transmit radiation along their own propagation path, the transmitter modules are aligned such that fronts of the transmitted radiation together form a total radiation front in the monitored zone which is larger than the fronts of the transmitted radiation from one of the transmitter modules and can be controlled for alternate transmission of radiation pulses; and

the deflection device has at least one planar reflection surface for radiation transmitted by the transmitter modules and reflected from the monitored zone with the radiation transmitted by the transmitter modules and the radiation reflected from the monitored zone being incident on the reflection surface at regions spatially separate from one another, the deflection device rotatable

configured to carry out a continuous rotary movement at a constant rotational speed.

2. (Currently Amended) A sensing device in accordance with claim 1, characterized in that the propagation paths of the radiation transmitted by the transmitter modules extend free of overlap in a region near to the device ~~at least partly, preferable at least inside a near region of the sensing device relevant to the safety of the eyes~~.

3. (Cancelled)

4. (Currently Amended) A sensing device in accordance with claim 1, characterized in that the transmitter modules are each made for the transmission of an elongated radiation front, with the elongated radiation front ~~preferably~~ being a continuous radiation line or being formed by discrete radiation spots arranged along a line.

5. (Previously Presented) A sensing device in accordance with claim 1, characterized in that the transmitter modules each include at least one laser diode as a radiation source which is designed for the transmission of a linear or line-shaped radiation front.

6. (Currently Amended) A sensing device in accordance with claim 1, characterized in that an optical transmitter ~~preferably provided in the form of a lens~~ is positioned in front of each transmitter module.

7. (Previously Presented) A sensing device in accordance with claim 1, characterized in that the transmitter modules and/or optical transmitter systems positioned in front of the transmitter modules are made with the same construction.

8. (Previously Presented) A sensing device in accordance with claim 1, characterized in that a common receiver device is associated with the transmitter modules.

9. (Currently Amended) A sensing device in accordance with claim 1, characterized in that the receiver device ~~has an areal radiation receiver which~~ is ~~preferably~~ matched to a ~~the~~ shape of a total radiation front jointly generated by the transmitter modules.

10. (Currently Amended) A sensing device in accordance with claim 1, characterized in that the receiver device, ~~in particular an areal radiation receiver~~ is divided into a plurality of receiver regions which can each be evaluated separately from one another and which each ~~preferably~~ include one or more photodiodes, with at least one receiver region being associated with each transmitter module.

11. (Currently Amended) A sensing device in accordance with claim 1, characterized in that an optical receiver system is associated with each receiver device and is ~~preferably~~ disposed in a common transmitter/receiver plane together with optional transmitter systems positioned in front of the transmitter modules.

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Previously Presented) A sensing device in accordance with claim 1, characterized in that a reflection surface of the deflection device extends at an inclination to a common transmitter/receiver plane of the transmitter modules and of the receiver device and in that the deflection device is rotatable around an axis extending approximately perpendicular to the transmitter/receiver plane.

16. (Currently Amended) A sensing device in accordance with claim 1, characterized in that the transmitter modules are arranged adjacent to the ~~side of a common~~ receiver device ~~, preferably such that the transmitter modules and the receiver device lie on one line at least in projection onto a common transmitter/receiver plane~~.

17. (Currently Amended) A sensing device in accordance with claim 1, characterized in that the transmitter modules are ~~preferably~~ arranged symmetrically on oppositely disposed sides of the receiver device.

18. (Previously Presented) A sensing device in accordance with claim 1, characterized in that an axis of rotation of the deflection device extends centrally through the receiver device and the transmitter modules are arranged equally far away from the axis of rotation.

19. (Previously Presented) A sensing device in accordance with claim 1, characterized in that the spacing between the transmitter modules is maximized such that the radiation transmitted by the transmitter modules is deflected by marginal regions of the deflection device.

20. (Currently Amended) A sensing device in accordance with claim 1, characterized in that the propagation path of the radiation transmitted by at least one transmitter module, ~~on the one hand,~~ and the receiving path of the radiation reflected from the monitored zone and directed onto the receiver device, ~~on the other hand,~~ extend free of overlap in a near region ~~including the radiation exit surface~~ of the sensing device.

21. (Previously Presented) A sensing device in accordance with claim 1, characterized in that the transmitter modules can be controlled for the alternate transmission of radiation pulses.

22. (Previously Presented) A method for the operation of an optoelectronic sensing device, in particular a laser scanner, comprising a transmitter device for the transmission of electromagnetic radiation, preferably pulsed electromagnetic radiation, at least one receiver device associated with the transmitter device and at least one deflection device, with which radiation transmitted by the transmitters device can be directed into a monitored zone and radiation reflected from the monitored zone can be directed onto the receiver device, wherein the transmitter device includes a plurality of transmitter modules, preferably precisely two transmitter modules, which are spatially separated from one another and which each transmit radiation along their own propagation path, and-wherein the transmitter modules are controlled such that the transmitter modules transmit the radiation with a time offset and in particular alternately in the form of radiation pulses in each case.

23. (currently amended) A method for using an optoelectric sensing device with a vehicle ~~Use of at least one optoelectronic sensing device, in particular a laser scanner~~, comprising:

mounting a sensing device to a vehicle, the sensing device comprising a transmitter device for the transmission of electromagnetic radiation, ~~preferably pulsed electromagnetic radiation,~~ at least one receiver device associated with the transmitter device and at least one deflection device, with which radiation transmitted by the transmitter device can be directed into a monitored zone and radiation reflected from the monitored zone can be directed onto a receiver device, wherein the transmitter device includes a plurality of transmitter modules,

~~preferably precisely two transmitter modules,~~ which are spatially separated from one another and which each transmit radiation along their own propagation path, the transmitter modules are aligned such that fronts of the transmitted radiation together form a total radiation front in the monitored zone which is larger than the fronts of the transmitted radiation from one of the transmitter modules and can be controlled for alternate transmission of radiation pulses; and

the deflection device has at least one planar reflection surface for radiation transmitted by the transmitter modules and reflected from the monitored zone with the radiation transmitted by the transmitter modules and the radiation reflected from the monitored zone being incident on the reflection surface at regions spatially separate from one another, the deflection device rotatable configured to carry out a continuous rotary movement at a constant rotational speed; and

operating the sensing device for object recognition and object tracking in relation to the vehicle ~~in conjunction with a vehicle, in particular for object recognition and object tracking~~.

24. (currently amended) The method of Claim 23 further comprises transmitting elongated radiation front in the direction of travel of the vehicle and adusting the transmitter modules such that the elongated radiation fronts extend in a vertical direction such that an elongated vertical overall radiation front is formed ~~Use in accordance with claim 23, characterized in that an optoelectronic sensing device is used which is made and is attached to or in the vehicle such that, in normal driving~~

~~operation, elongated radiation fronts transmitted by the transmitter modules respectively extend, on a propagation in the direction of travel, at least substantially in a vertical direction, with the radiation fronts preferably lying over one another in a vertical direction~~.

25. (New) The optoelectronic sensing device of claim 1 is further defined as a laser scanner.

26. (New) The optoelectronic sensing device of claim 1 wherein the plurality of transmitter modules is further defined as two transmitter modules.

27. (New) The optoelectronic sensing device of claim 6 wherein the optical transmitter system is in the form of a lens.